APNIC support for Internet development

APT/PITA Regional Meeting on ICT for the Pacific
25-27 August 2004, Nadi, Fiji

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What is APNIC?

• Regional Internet Registry (RIR) for the Asia Pacific region
  • Regional authority for Internet resource distribution
  • One of four RIR currently operating globally
  • IP addresses (IPv4 and IPv6), AS numbers, reverse DNS delegation
  • Provide services to ~950 ISPs

• Industry self-regulatory body
  • Established in 1993
  • Consensus-based, open and transparent
  • Non-profit, neutral and independent
  • Open membership-based structure
Support for Internet development

• Core services
  • Critical infrastructure services
  • Policy coordination

• Other services
  • Training and education
  • Information resources
  • Technical support services

• Other activities
  • Development activities
  • Internet “governance”
Core APNIC services

1. Internet resource management
   - IP address allocation to ISPs and NIRs
   - IP address assignment to end users
   - AS number assignments

2. Resource registration
   - Authoritative registration server
     - whois.apnic.net
   - Reverse DNS management
     - in-addr.arpa, ip6.arpa (ip6.int)

3. Policy coordination
   - APNIC Open Policy Meetings: 2 per year
   - ASO and ICANN processes (more later)
What is an IP address?

The Internet

DNS

www.cernet.cn?

My Computer

202.112.0.46

202.12.29.142

www.cernet.cn
What is an IP address?

- Internet infrastructure address
  - Globally unique*
- A finite common resource
  - IPv4: 32-bit number
    - e.g. 192.131.13.3
    - 4 billion addresses available
  - IPv6: 128-bit number
    - e.g. 3ffe:1a00:ff00::
    - Potentially*, equal to (IPv4)4
- IP does not mean “Intellectual Property”
APNIC Policy Process

Anyone can participate

Internet community proposes and approves policy

All decisions & policies documented & freely available to anyone
Training and Education

- Training tutorials and workshops
  - Target ISP technical staff
  - APNIC core responsibilities
  - Additional technical topics of interest to APNIC members
- Curriculum
  - Internet Resource Management I & II
  - Internet Routing Registry
  - DNS workshop
  - Routing workshop under development
- Partners sought to host
  - “Expression of Interest” may be submitted
Outreach and collaboration

- RIR Coordination
  - ICANN process
  - NRO activities
- Participation at various forums
  - WSIS, ITU, APT, PITA, SANOG, APRICOT…
- MoUs signed between parties
  - PITA, SANOG, rootserver operators, others…
Information resources

- Helpdesk and resource guides
  - IPv4, IPv6, WHOIS database, ASNs
- Reports and statistics
  - Global statistical data on IP allocations
  - Annual reports, newsletter etc
- MyAPNIC
  - “All in one” secure management interface for members to manage relationship with APNIC
- ISP Support Resources
  - Public website currently under planning
IPv4 resource guide

IPv4 Internet addresses are unique 32-bit identifiers used to address hosts on the Internet.

Although IPv6 addresses are now available, most networks on the Internet are still addressed using IPv4 address space.

Contents
- Policy and IPv4 information
- Request forms

Policy and IPv4 information

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<th>Request guidelines</th>
<th>Membership and fees</th>
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<td>IPv4 allocation and assignment requests [txt]</td>
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<td>Fee schedule</td>
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<td>The “no questions asked” prefix return policy [txt]</td>
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<td>Membership transfer procedures</td>
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<td>Policies for the transfer of historical Internet resources</td>
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<td>IP and ASN records transferred to APNIC</td>
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<td>Translated documents</td>
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<td>RIR Comparative policy overview</td>
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APNIC information | Data and statistics | Other

IPv4 resource guide - Microsoft Internet Explorer

Address: http://www.apnic.net/services/ipv4_guide.html

Google*
Technical services

• Core technical services
  • Registration database (whois)
  • Reverse DNS (in-addr.arpa, ip6.arpa)

• Troubleshooting tools
  • “Looking glasses” to assist BGP debugging
  • APNIC Routing Registry

• MyAPNIC
  • Customer website for APNIC services
  • “All in one” secure management interface
Technical services

• Root server deployments
  • MoU’s with root operators (F, I so far)
  • New host locations welcome (send EOI’s)
  • More root servers now outside of the US

• APNIC PoPs
  • Reliable distributed services
    • AU, JP, HK
  • Online services: reverse DNS, whois, www
Development support

- Research & Development
  - Partner in PAN ICT R&D grants programme
    - With UNDP, IDRC, AMIC, Microsoft
    - e.g. grant to PFnet
  - [http://www.apnid.net/projects/ictrnd](http://www.apnid.net/projects/ictrnd)

- Funding assistance for fellowship and training
  - APNIC Fellowship Programme
  - APNIC Training Programme
  - APRICOT support and sponsorship
  - InfoDev (World Bank)
  - ITU
Internet “Governance”

- Active participation in ICANN process
- Founding of Address Supporting Organisation (ASO)
- Substantial funding (fee) input into ICANN
- Number Resource Organisation
- Coalition of all RIRs
  - APNIC, ARIN, LACNIC, RIPE NCC
- Independent from ICANN
- For joint activities among RIRs
  - Technical services (in-addr.arpa, global whois etc)
  - Establishment of ASO with ICANN (by MoU)
Internet “Governance”

• Active participation in WSIS I and II
  • Since early 2003
  • Supporting ongoing evolution of “ICANN Model”

• “Open Regional Dialog and Capacity Building on Internet Governance”
  • Proposed project with UNDP/APDIP (KL) and IDRC (Ottawa/Singapore)
  • Development of Asia Pacific inputs into WSIS
    • WGIG in particular
  • Regional survey, resource website, and governance training
APNIC Open Policy Meeting

APNIC 18
Nadi, Fiji, 31 Aug - 3 Sep 2004

• Participate in policy development
• Attend workshops, tutorials & presentations
• Exchange knowledge and information with peers
• Stay abreast with developments in the Internet
• View multicast online
• Provide your input in matters important to you
• Fellowship Available

http://www.apnic.net/meetings/18
<table>
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<th>Time</th>
<th>Tutorials</th>
<th>Open Policy Meeting</th>
<th>Member Meeting</th>
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<tr>
<td>8:30</td>
<td>Registration</td>
<td>Opening plenary</td>
<td>APNIC Member Meeting</td>
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<tr>
<td>9:00</td>
<td>Internet resource management essentials</td>
<td>Policy SIG</td>
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<tr>
<td>10:30</td>
<td>Morning tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Internet resource management essentials</td>
<td>IX SIG</td>
<td>APNIC Member Meeting</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch</td>
<td>Over lunch on Wednesday, learn how you can influence IP policy</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00</td>
<td>IRR concepts, APTLD</td>
<td>Policy SIG</td>
<td>APNIC Member Meeting</td>
</tr>
<tr>
<td>15:30</td>
<td>Afternoon tea</td>
<td>DNS operations SIG</td>
<td></td>
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<tr>
<td>16:00</td>
<td>IRR case study and demo</td>
<td>Policy SIG, Routing SIG, NR SIG</td>
<td>APNIC Member Meeting</td>
</tr>
<tr>
<td>17:30</td>
<td>Break</td>
<td>NR training, PGP key signing BOF</td>
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Special Invitation...

APNIC CEOs’ Meeting
Nadi, Fiji, 30 Aug 2004

- First ever APNIC event for CEOs and Snr Executives
- APNIC business and operating model
- Global issues affecting IP addressing
- Provide input into APNIC strategy and policy
- Networking with peers

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Thanks

Questions?